REMARKS

Claims 5-6 and 12-13 are pending in this application. By this Amendment, claims 1-2 and 4 are cancelled without prejudice to or disclaimer of the cancelled subject matter and claims 5 and 13 are amended. Applicants reserve the right to file a continuing application directed to the cancelled subject matter. No new matter is added.

I.   Claim Amendments

By this Amendment, claim 5 is amended to recite that the viewing angle range adjustment device sets grayscale values of different color sub pixels of the pixels <u>based on different viewing angle characteristics of the different color sub pixels</u>. Because different color sub pixels have different viewing angle characteristics, the appropriate settings to obtain a given viewing angle characteristic is different for each of the different colored sub pixels. This feature finds support, for example, in paragraph [0044] of the specification as filed. Claim 5 is further amended to recite that the viewing angle range adjustment device sets different grayscale values for the same color sub pixels of <u>adjacent ones</u> of the first, second, and third pixels. This is supported by Fig. 3 which shows red (R) sub pixels of values 64 and 188 in the left upper and left lower pixels, respectively, and green (G) sub pixels of values 68 and 186 those same two different pixels.

Claim 13 is amended to overcome the rejection under 35 U.S.C. §112, as discussed below.

II.   The Claims Comply With 35 U.S.C. §112

The Office Action rejects claims 12 and 13 under 35 U.S.C. §112, first paragraph, as allegedly not complying with the written description requirement. Specifically, the Office Action alleges that there is no support in the specification for the feature that the same grayscale can be applied to two different color sub pixels. Applicants respectfully traverse the rejection.

Regarding claim 12, the Office Action cites Fig. 3 and alleges that the feature of different color sub pixels having the same grayscale value is not supported. However, Fig. 3 supports this feature. For example, Fig. 3 shows that a single pixel, having sub pixel values of 127 for all three sub pixels, can be converted to four pixels in which sub pixels of different pixels and of different colors can have the same value. See the sub pixels of values 64 and 188.

Regarding claim 13, by this Amendment, "before" is amended to "after" to correct an inadvertent error, overcoming the rejection.

Applicants request withdrawal of the rejection.

III. The Claims Are Patentable Over The Applied References

The rejection of claims 1, 2 and 4 is moot because claims 1, 2 and 4 are cancelled.

The Office Action rejects claims 5, 6, 12 and 13 under 35 U.S.C. §102(b)[1] over U.S. Patent No. 6,750,875 to Keely, Jr. et al. ("Keely"). Applicants respectfully traverse the rejection.

Regarding independent claim 5, Keely fails to disclose (1) "a resolution conversion device that converts original image data for a single pixel including sub pixels corresponding to a plurality of colors to resolution-converted image data <u>including image data of first, second, and third pixels</u> each having sub pixels corresponding to a plurality of colors;" (2) "the viewing angle range adjustment device sets grayscale values of different color sub pixels of the pixels <u>based on different viewing angle characteristics of the different color sub pixels</u>"; and (3) "wherein after converting the resolution, the viewing angle range adjustment device sets different grayscale values for the same color sub pixels of <u>adjacent ones</u> of the first, second, and third pixels."

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[1] Keely does not qualify as prior art against this application under 35 U.S.C. §102(b) because its patent date is after Applicants' U.S. filing date.

Keely discloses methods and apparatus for (1) increasing the perceived resolution of images and (2) decreasing required bandwidth for transmitting display signals to the display (col. 1, lines 15-20). Keely discloses a video adapter 48 that drives a monitor 47 (Fig. 1). In the horizontal direction, resolution is increased by using different sub pixels to represent different portions of an image (col. 5, lines 56-61; col. 8, lines 43-45). In the vertical direction, Keely requires that the pixel sub-component density in the vertical direction is increased. Thus, with Keely, the display must be manufactured to have a larger number of pixels in the vertical direction in order to implement the process (col. 10, lines 40-45). For example, the number of rows can be doubled as in Figs. 4A and 4B in which two pixels having a total of six sub pixels correspond to a single pixel with three sub pixels in a normal display (Fig. 4A; col. 9, lines 38-58), resulting in pixels that are 1.5 times taller than they are wide (col. 9, lines 59-61).

Keely fails to disclose feature (1) above because Keely does not disclose converting one pixel of original image data into three pixels as claimed. In contrast, Keely discloses performing "displace sampling" and "mapping of spatially different sets of one or more samples to individual pixel sub-components" (col. 8, lines 49-57). Thus, the image data is sampled such that spatially different image portions are mapped to different pixel sub-components. In other words, a single pixel actually displays, in different sub-components, different image pixels or portions of the image. This does not correspond to converting a single pixel of image data into first, second, and third pixels.

Keely fails to disclose feature (2) above because Keely is silent as to setting different color sub pixels to different grayscale values based on different viewing angle characteristics of the different color sub pixels.

Keely fails to disclose feature (3) above because, while the Office Action cites to col. 11, line 62 - col. 12, line 9 and col. 13, lines 45-49, the cited sections only discuss the

method of transmitting the data defining the sub pixel values for two pixels, which is done to conserve bandwidth. The method does <u>not</u> require that the values for the same color sub pixels of the two pixels are different. The cited sections are under the heading "Image Data Compression" (col. 11, line 8). In order to conserve bandwidth, Keely discloses using a single pixel's data to set the values for two pixels of monitor 47. Instead of the data defining a single pixel data comprising luminous intensity values for each of the red, green, and blue sub-components as is conventionally done, Keely discloses dividing the data for a pixel into four values: luminous intensity values for the red, green, and blue sub-components, and a bias value. In operation, monitor 47 divides the luminous intensity values for each of the red, green, and blue sub-components of the data for "one" pixel between the corresponding color sub-components of two display pixels according to the bias value. This saves bandwidth because two pixels are driven according to the data contained in "one" pixel's data. See col. 13, lines 5-32. Thus, the cited section describes transmitting the intensity values for the sub pixels of two pixels of the image in the data for one pixel. The cited section does not, however, disclose that the grayscale values for the same color subpixel are set different for adjacent pixels, as claimed.

For the foregoing reasons, Applicants request withdrawal of the rejection.

IV.   **Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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Attachment:
    Request for Continued Examination (RCE)

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